

Systems and methods for estimating the bias and scale factor in a speed sensor and pitch sensor using a modified adaptive filter. A filter learns adaptively in a random manner to estimate the errors in the vehicle speed and pitch angle. The aiding measurements used in this approach are exemplarily DGPS travel distances. The filter adaptively estimates error source values during the availability of DGPS, and can then use these estimates to aid an INS during DGPS outages.

Figures